UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/665,586	09/19/2003	Thomas E. Creamer	BOC9-2003-0029 (398)	6439

				EXAMINER
40987	7590	10/23/2006		MITCHELL, JASON D

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ART UNIT	PAPER NUMBER
2193	

DATE MAILED: 10/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _05 September 2006_.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-30_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-30_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

DETAILED ACTION

This action is in response to remarks filed 9/5/06.

At Applicant's request, claims 1, 14, 17 and 30 have been amended. Claims 1-30 are

pending in this application.

Response to Amendment

The amendment to claim 14 filed on 9/5/06 is sufficient to overcome the 35 USC

101 rejection of claims 14 and 15. Accordingly the rejection is withdrawn.

Response to Arguments

Applicant's arguments filed 9/5/06 have been fully considered but they are not

persuasive.

In the last full paragraph on pg. 12, Applicant states:

> Specifically, Boukobza's autonomous agents do not include a test engine that loads
> test routines, executes the test routines in response to received test commands, and
> analyzes the results of the executed test routines. Instead, as explicitly described in
> the reference, Boukobza relies on each monitored node being configured to "control
> its own monitoring." (Col. 5, lines 2-7.) The monitoring carried out by the monitored
> nodes in Boukobza, moreover, does not generate results that are then analyzed
> either by the nodes or the autonomous agents installed in the nodes. Rather as also
> explicitly described, Boukobza provides that each autonomous agent "feeds back to
> the management node information" that can be displayed on a graphical user
> interface of the management node. (See, e.g., Col. 3, lines 30-39.)

Examiner respectfully disagrees. In col. 3, lines 30-39, Boukobza discloses "Each

autonomous agent ... in addition to the parameter measurements it performs [i.e.

executing test routines to generate results], the conditions it evaluates, [i.e. test routines

it analyzes] ... feeds back to the management node the information to be displayed".

Further, col. 5, lines 9-13 Boukobza discloses "The starting and stopping of the

monitoring process are controlled by the management node. A new object can easily be

incorporated by the process and monitored by an autonomous agent". Thus, as

indicated in the rejections below, it can clearly be seen that Boukobza discloses the

claimed 'test engine'.

In the paragraph bridging pp. 12 and 13, Applicant states:

> The parameters, conditions and associated actions used by each monitored node to
> control its own monitoring are stored in a "scanlog" at each monitored node. (Col. 5,
> lines 2-7.) The management node, in addition to storing the configuration files,
> stores "status files" and "parameter files" for each of the nodes monitored by the
> management node. (Col. 5, lines 7-10.) Nowhere does Boukobza teach an agent
> that comprises a log for storing information internally within the agent itself.

Examiner respectfully disagrees. Specifically, the "LOG FILE", depicted in the only

drawing, as internal to the Autonomous Agent (SAA) on the node (N1) anticipates the

claimed "ghost log [that] stores information internally within said ghost agent".

In the first full paragraph on pg. 13, Applicant states:

> Likewise, Boukobza does not expressly or inherently teach a ghost agent that
> includes a controller to control signals from an external source and to control a life-
> span of the agent and/or resources used by the agent. This follows because, as
> already noted, each monitored node controls its own monitoring. No type of agent
> downloaded at, or received by, a particular node has the task of doing so. Moreover,
> Boukobza is silent as to both the life-span and the resources utilized by the
> autonomous agent. Thus Boukobza does not teach a ghost agent that includes a
> controller to control either the agent's life-span or the resources used by the agent.

Examiner respectfully disagrees. Boukobza discloses a 'configuration file command'

("==>MAX_CPU percent of total cpu:") that "indicates the maximum cpu time allocated

for the autonomous agent ... in a node." (col. 6, lines 55-58) Boukobza further discloses

the agent reading this configuration file (col. 21, lines 57-60 "The operation of the

generic agent of a node ... reading of the configuration file"). Thus it can be seen that

Boukobza anticipates a ghost agent accepting control signals (col. 6, lines 55-58

"==>MAX_CPU percent of total cpu:") from an external source (col. 21, line 51 "sending

of the resulting configuration file to each agent") that control at least the resources used

by said ghost agent (col. 6, lines 55-58 "the maximum cpu time allocated").

In view of the above discussion the rejections are maintained.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form

the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3-11, 17, 19-27 and 30 are rejected under 35 U.S.C. 102(b) as being

anticipated by US 6,122,664 to Boukobza et al. (Boukobza).

Regarding Claims 1, 17 and 30: Boukobza discloses receiving a problem indication

relating to said application (col. 2, lines 46-52 'test conditions ... and then ... warn of a

problem'); identifying a host within a grid environment (col. 4, lines 64-67 'agents are

installed ... in the nodes to be monitored'; col. 5, lines 13-18 'An autonomous agent

SAA is chiefly composed of a generic agent GA related to specific modules SM (SM1,

SM2, ..., SMn), each of which is specific to an object type'); associating a ghost agent

with said host (col. 4, lines 64-67 'agents are installed ... in the nodes to be monitored';

col. 5, lines 13-18 'An autonomous agent SAA is chiefly composed of a generic agent

GA related to specific modules SM (SM1, SM2, ..., SMn), said ghost agent being

configured to include at least one of a test engine, a ghost log, and a controller, wherein

the test engine loads test routines into said ghost agent (col. 5, lines 9-13 "A new object

can easily be incorporated by the process and monitored by an autonomous agent"),

executes the test routines (col. 3, lines 30-39 "the parameter measurements it

performs") in response to received test commands (col. 5, lines 9-13 "The starting and

stopping of the monitoring process are controlled by the management node."), and

analyzes within said ghost agent results of the executed test routines (col. 3, lines 30-39

"the conditions it evaluates ... the actions ... associated with these conditions it initiates

or the operations it performs later"), wherein the ghost log stores information internally

within said ghost agent (see "LOG FILE" shown in the only Figure), and wherein said

controller accepts control signals (col. 6, lines 55-58 "==>MAX_CPU percent of total

cpu:") from an external source (col. 21, line 51 "sending of the resulting configuration file

to each agent") and controls at least resources used by said ghost agent (col. 6, lines

55-58 "the maximum cpu time allocated"); replicating actions of said host for use by said

ghost agent (col. 6, lines 30-34 'log files of the actions of each node monitored');

recording data relating to said replicated actions (col. 5, lines 23-25 'A parameter ...

(command to be executed, trace, curve display, etc.)'); and responding to said problem

based at least in part upon said recorded data (col. 5, lines 59-62 'If a parameter condition is true, an action is initiated').

Regarding Claims 3 and 19: The rejections of claims 1 and 17 are incorporated, respectively; further Boukobza discloses providing a customer service interface (col. 4, lines 50-51 'The interface GUI also allows the display of parameter value curves'), wherein a customer service representative utilizes said customer service interface during said responding step (col. 6, lines 30-34 'collecting (in the management node) the log files ... for the independent analysis preformed by the management node.').

Regarding Claims 4 and 20: The rejections of claims 1 and 17 are incorporated, respectively; further Boukobza discloses executing a test using said ghost agent, wherein said test utilizes said recorded data (col. 5, lines 23-29 'conditions related to the measurement just performed ... the action to be initiated when this condition is true').

Regarding Claims 5 and 21: The rejections of claims 1 and 17 are incorporated, respectively; further Boukobza discloses said responding further comprises performing a debugging operation using said ghost agent, wherein said debugging operation utilizes at least one replicated action (col. 9, lines 20-21 'the measurement is stored in a "trace" file TF for autonomous analysis').

Regarding Claims 6 and 22: The rejections of claims 1 and 17 are incorporated, respectively; further Boukobza discloses comparing said recorded data with at least one operational threshold provided by said ghost agent, such that said recorded data includes results of said comparing step (col. 5, lines 23-29 'A parameter contains ... the description of ... conditions related to the measurement ... (operator, threshold, etc.)').

Regarding Claims 7 and 23: The rejections of claims 1 and 17 are incorporated, respectively; further Boukobza discloses automatically detecting a problem within said application; and automatically generating said problem indication responsive to said detecting step (col. 2, lines 46-52 'test conditions ... and then ... warn of a problem').

Regarding Claims 8 and 24: The rejections of claims 1 and 17 are incorporated, respectively; further Boukobza discloses responsive to receiving said problem indication, automatically routing application activity from an area of said grid environment in which said problem occurred to an alternative area of said grid environment (col. 7, lines 59-63 'the application is switched to another node, for reasons of ... failure, of the original node').

Regarding Claims 9 and 25: The rejections of claims 1 and 17 are incorporated, respectively; further Boukobza discloses automatically fixing said problem based at least in part upon said recorded data (col. 2, lines 46-52 'test conditions ... and then ... correct').

Regarding Claims 10 and 26: The rejections of claims 1 and 17 are incorporated, respectively; further Boukobza discloses selecting a plurality of said hosts; and for each host repeating said associating step, said replicating step, said recording step, and said responding step (col. 4, lines 36-39 'monitor n machines'; col. 5, lines 13-18 'An autonomous agent SAA ... specific to an object type').

Regarding Claims 11 and 27: The rejections of claims 1 and 17 are incorporated, respectively; further Boukobza discloses identifying a location that is external to said ghost agent; and conveying said recorded data to said identified location (col. 6, lines

30-34 'collecting (in the management node) the log files ... for the independent analysis

preformed by the management node.'). Note Identification of the Management Node is

necessary to successfully transfer the data from collected by the agents to the

Management Node.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 2 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over

US 6,122,664 to Boukobza et al. (Boukobza) in view of US 2002/0087949 to

Golender et al. (Golender).

Regarding Claims 2 and 18: The rejections of claims 1 and 17 are incorporated,

respectively; further Boukobza discloses receiving a problem indication (col. 2, lines 46-

52 'test conditions ... and then ... warn of a problem') and an associating step (col. 4,

lines 64-67 'agents are installed ... in the nodes to be monitored'; col. 5, lines 13-18 'An

autonomous agent SAA ... is specific to an object type'), and that said responding step

further comprises using said recorded data to determine actions of said user that

resulted in said problem (col. 6, lines 30-35 'the log files of the actions ... for the

independent analysis'). But does not explicitly disclose receiving said problem indication

from a user.

Golender teaches that 'Quite often, software problems appear for the first time at a customer's site' and 'when trying to debug these problems ... in response to a bug report ... the problem cannot be reproduced' (par. [0008])

Thus it would have been obvious to a person of ordinary skill in the art at the time of the invention to perform Boukobza's associating step (col. 4, lines 64-67 'agents are installed ... in the nodes to be monitored'; col. 5, lines 13-18 'An autonomous agent SAA ... specific to an object type') on a host associated with the user (Golender [0008] 'customer's site') and in response to the 'bug report' taught by Golender ([0008]) because, as noted above, 'Quite often, software problems appear for the first time at a customer's site' and 'when trying to debug these problems ...in response to a bug report ... the problem cannot be reproduced' (par. [0008]).

Claims 12-16 and 28-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,122,664 to Boukobza et al. (Boukobza) in view of US 6,681,243 to Putzolu et al. (Putzolu).

Regarding Claims 12 and 28: The rejections of claims 1 and 17 are incorporated, respectively; further Boukobza does not disclose moving said host and ghost agent within said grid environment.

Putzolu teaches moving said host within said grid environment (col. 3, lines 59-61 'Agents ... move to another device or environment'; col. 4, lines 17-23 'an agent may be ... a user application such as a word processor'); and moving said ghost agent within said grid environment (col. 3, lines 59-61 'Agents ... move to another device or

environment'; col. 4, lines 17-23 'an agent may be ... an application functioning to

diagnose, report on, or correct network conditions') in an analogous art for the purpose

of managing a network (col. 3, lines 48-54 'The system and method ... allow for easier

and more effective management of a network').

It would have been obvious to a person of ordinary skill in the art at the time of the

invention to use the techniques disclosed by Boukobza (col. 4, lines 36-39 'the process

... to monitor n machines') to monitor mobile hosts as taught by Putzolu (col. 4, lines 17-

23'a user application such as a word processor') and to move Boukobza's ghost agent

(col. 4, lines 64-67 'autonomous agents') in accordance with movement of the

associated host (col. 3, lines 59-61 'Agents ... move to another device or environment')

in order to 'allow for easier and more effective management of a network' (Putzolu col.

3, lines 48-54) which contained such mobile hosts.

Regarding Claims 13 and 29: The rejections of claims 1 and 17 are incorporated,

respectively; further Boukobza does not disclose disassociating said ghost agent from

said host; and associating said ghost agent with a different host.

Putzolu teaches disassociating an agent from said host; and associating said ghost

agent with a different host (col. 3, lines 59-61 'Agents ... may execute on a device or

environment, move to another device or operating environment, and resume

execution.') in an analogous art for the purpose of managing a network (col. 3, lines 48-

54 'The system and method ... allow for easier and more effective management of a

network').

It would have been obvious to a person of ordinary skill in the art at the time of the

invention to provide Boukobza's Ghost Agents (col. 4, lines 64-67 'autonomous agents')

with the mobility taught by Putzolu (col. 3, lines 59-61 'Agents ... may execute on a

device or environment, move to another device or operating environment, and resume

execution.') in order to 'allow for easier and more effective management of a network'

(Putzolu col. 3, lines 48-54).

Regarding Claim 14: Boukobza discloses a plurality of hosts, wherein said hosts are

software objects for an application domain distributed within a grid environment said

grid environment being a distributed computing system that includes a plurality of

hardware and software components (col. 4, lines 64-67 'agents are installed ... in the

nodes to be monitored'; col. 5, lines 13-18 'An autonomous agent SAA ... is specific to

an object type'), ; at least one ghost agent configured to be associated with at least one

of said hosts (col. 5, 13-18 'An autonomous agent SSA is chiefly composed of a generic

agent GA related to specific modules SM (SM1, SM2 ... SMn) each of which is specific

to an object type or to a particular domain'), and is configured to include at least one of

a test engine, a ghost log, and a controller, said test engine configured to load test

routines into said ghost agent (col. 5, lines 9-13 "A new object can easily be

incorporated by the process and monitored by an autonomous agent"), execute the test

routines (col. 3, lines 30-39 "the parameter measurements it performs") in response to

received test commands (col. 5, lines 9-13 "The starting and stopping of the monitoring

process are controlled by the management node."), and analyze within said ghost agent

results of the executed test routines (col. 3, lines 30-39 "the conditions it evaluates ...

the actions ... associated with these conditions it initiates or the operations it performs later"), said ghost log configured to store information internally within said ghost agent (see "LOG FILE" shown in the only Figure), and said controller configured to accept control signals (col. 6, lines 55-58 "==>MAX_CPU percent of total cpu:") from an external source (col. 21, line 51 "sending of the resulting configuration file to each agent") and control at least system resources used by said ghost agent (col. 6, lines 55-58 "the maximum cpu time allocated"); and a customer service application configured to utilize ghost agents to determine actions leading to at least one problem (col. 6, lines 30-35 'collecting (in the management node) the log files of the actions ... for the independent analysis') but does not disclose wherein said ghost agent moves within a grid environment.

Putzolu teaches an agent which moves within a grid environment (col. 3, lines 59-61 'Agents ... may execute on a device or environment, move to another device or operating environment, and resume execution.') in an analogous art for the purpose of managing a network (col. 3, lines 48-54 'The system and method ... allow for easier and more effective management of a network').

It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide Boukobza's Ghost Agents (col. 4, lines 64-67 'autonomous agents') with the mobility taught by Putzolu (col. 3, lines 59-61 'Agents ... may execute on a device or environment, move to another device or operating environment, and resume execution.') in order to 'allow for easier and more effective management of a network' (Putzolu col. 3, lines 48-54)

Regarding Claim 15: The rejection of claim 14 is incorporated; further Boukobza

discloses said customer service application is further configured to debug said at least

one reported problem using said ghost agents (col. 2, lines 46-52 'test conditions ... and

then ... correct').

Regarding Claim 16: The rejection of claim 14 is incorporated, further Boukobza

discloses a service data store communicatively linked to a plurality of ghost agents (Fig.

1, 'Trace File'), wherein said service data store is configured to record data generated

by said ghost agents for use by said customer service application (col. 6, lines 30-35

'collecting (in the management node) the log files of the actions ... for the independent

analysis').

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy

as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

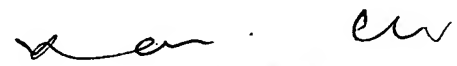than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Mitchell whose telephone number is (571) 272-3728. The examiner can normally be reached on Monday-Thursday and alternate Fridays 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on (571) 272-3719. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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10/4/06

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